

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An inventory management method for controlling amounts of stocks, the method comprising the steps of:

storing delivery times and quantities of order lots accepted and restock lead times predetermined every item in a storage;

selecting at least one order lot accepted, having a delivery time within a period from “b” days before to “a” days after a basic time, from said order lots accepted, to set a threshold value  $x+y\sigma_1$  (where  $y$  is equal to or more than 0) based upon both an average  $x$  and a standard deviation  $\sigma_1$  of quantities of said selected order lot(s) accepted;

classifying at least one order lot accepted having a quantity  $\alpha$  of the selected order lot(s) accepted as a normal accepted order lot(s), wherein the  $\alpha$  is less than or equal to said threshold value; and

calculating a basic stock using a predetermined formula from said classified normal accepted order lot(s).

2. (Original) An inventory management method for controlling amounts of stocks, the method comprising the steps of:

storing delivery times and quantities of order lots accepted and restock lead times predetermined every item in a storage;

selecting at least one order lot accepted, having a delivery time within a period from “b” days before a basic time to the basic time, from said order lots accepted, to set a threshold value  $x_1+y_1\sigma_2$  (where  $y_1$  is equal to or more than 0) based upon both an average  $x_1$  and a standard deviation  $\sigma_2$  of quantities of said selected order lot(s) accepted, and selecting at least one order lot accepted, having a delivery time within a period from the basic time to “a” days after the basic time, from said ordered lots, to set a threshold value  $x_2+y_2\sigma_3$  (where  $y_2$  is equal to or more than 0) based upon both an average  $x_2$  and a standard deviation  $\sigma_3$  of quantities of said selected order lot(s) accepted;

classifying at least one order lot accepted having a quantity “B”, being less than or equal to said threshold value  $(x_1+y_1\sigma_2)$ , of the selected order lot(s) accepted, having a delivery

time before the basic time, as a normal accepted order lot(s), and classifying at least one order lot accepted having a quantity "A", being less than or equal to said threshold value  $(x_2 + y_2 \sigma_3)$ , of the selected order lot(s) accepted, having a delivery time after the basic time, as the normal accepted order lot(s); and

calculating a basic stock using a predetermined formula from said classified normal accepted order lot(s).

3. (Currently Amended) The method according to claim 1-~~or~~2, wherein said calculating a basic inventory step comprises:

calculating an order point "r" and the basic stock  $\beta$  using following equations:

$$r = cz + m\sigma_4 \sqrt{c}$$

$$\beta = r + tz$$

where z signifies an average shipping quantity per day of an order lot, having a delivery time within a period from the basic time to "a" days after, of said normal accepted order lot(s), c represents the restock lead time, t is an order differential time delay, m is equal to or greater than 1,  $\sigma_4$  signifies a standard deviation of shipping quantities per day of order lots accepted, having a delivery time within a period from "b" days before to the basic time, of said normal accepted order lot(s);

when  $d + e \leq r$ , where d signifies a present amount of a stock and e represents a quantities on order, calculating a required order quantity "f" using an equation  $f = \beta - (d + e - cz)$ .

4. (Currently Amended) The method according to claim 1-~~or~~2, wherein a relationship between said a and b is  $a:b=1:1.5-3$ .

5. (Currently Amended) The method according to claim 1-~~or~~2, wherein said "a" is in a range as follows:  $5days \leq a \leq 60days$ .

6. (Currently Amended) The method according to claim 1-~~or~~2, further comprising the step of:

setting an alarm criteria range based upon said basic stock  $\beta$ , and monitoring a total of shipping quantities in a period from a basic alarm time to "c" days after the basic alarm time, when the total is beyond the alarm criteria range issuing an warning.

7. (Original) The method according to claim 6, further comprising the steps of:

setting an alarm criteria range based upon said basic stock  $\beta$ , and monitoring a total of shipping quantities in a period from a basic alarm time to “c” days after the basic alarm time, when the total is beyond the alarm criteria range issuing an warning; and

recalculating, when the warning is issued, said basic stock and/or said order point to reconfigure them.

8. (Original) An inventory management system for controlling amounts of stocks, comprising:

storing means for storing delivery times and quantities of order lots accepted and restock lead times predetermined every item therein;

selecting means for selecting at least one order lot accepted, having a delivery time within a period from “b” days before to “a” days after a basic time, from said order lots accepted, to set a threshold value  $x+y\sigma_1$  (where y is equal to or more than 0) based upon both an average x and a standard deviation  $\sigma_1$  of quantities of said selected order lot(s) accepted;

classifying means for selecting at least one order lot accepted having a quantity  $\alpha$  of the selected order lot(s) accepted as a normal accepted order lot(s), wherein the  $\alpha$  is less than or equal to said threshold value; and

calculating means for calculating a basic stock using a predetermined formula from said classified normal accepted order lot(s).

9. (Original) An inventory management system for controlling amounts of stocks, comprising:

storing means for storing delivery times and quantities of order lots accepted and restock lead times predetermined every item therein;

selecting means for selecting at least one order lot accepted, having a delivery time within a period from “b” days before a basic time to the basic time, from said order lots accepted, to set a threshold value  $x_1+y_1\sigma_2$  (where  $y_1$  is equal to or more than 0) based upon both an average  $x_1$  and a standard deviation  $\sigma_2$  of quantities of said selected order lot(s) accepted, and selecting at least one order lot accepted, having a delivery time within a period from the basic time to “a” days after the basic time, from said ordered lots, to set a threshold

value  $x_2 + y_2\sigma_3$  (where  $y_2$  is equal to or more than 0) based upon both an average  $x_2$  and a standard deviation  $\sigma_3$  of quantities of said selected order lot(s) accepted;

classifying means for classifying at least one order lot accepted having a quantity "B", being less than or equal to said threshold value  $(x_1 + y_1\sigma_2)$ , of the selected order lot(s) accepted, having a delivery time before the basic time, as a normal accepted order lot(s), and classifying at least one order lot accepted having a quantity "A", being less than or equal to said threshold value  $(x_2 + y_2\sigma_3)$ , of the selected order lot(s) accepted, having a delivery time after the basic time, as the normal accepted order lot(s); and

calculating means for calculating a basic stock using a predetermined formula from said classified normal accepted order lot(s).

10. (Currently Amended) The system according to claim 8-~~or~~ 9, wherein said calculating means comprises:

calculation means for calculating an order point "r" and the basic stock  $\beta$  using following equations:

$$r = cz + m\sigma_4\sqrt{c}$$

$$\beta = r + tz$$

where z signifies an average shipping quantity per day of an order lot, having a delivery time within a period from the basic time to "a" days after, of said normal accepted order lot(s), c represents the restock lead time, t is an order differential time delay, m is equal to or greater than 1,  $\sigma_4$  signifies a standard deviation of shipping quantities per day of order lots accepted, having a delivery time within a period from "b" days before to the basic time, of said normal accepted order lot(s);

when  $d + e \leq r$ , where d signifies a present amount of an stock and e represents a quantities on order, calculation means for calculating a required order quantity "f" using an equation  $f = \beta - (d + e - cz)$ .

11. (Currently Amended) The system according to claim 8-~~or~~ 9, wherein a relationship between said a and b is  $a:b=1:1.5-3$ .

12. (Currently Amended) The system according to claim 8-~~or~~ 9, wherein said "a" is in a range as follows:  $5days \leq a \leq 60days$ .

13. (Currently Amended) The system according to claim 8-~~or~~9, further comprising:  
warning means for setting an alarm criteria range based upon said basic stock  $\beta$ , and  
monitoring a total of shipping quantities in a period from a basic alarm time to “c” days after  
the basic alarm time, when the total is beyond the alarm criteria range issuing an warning.

14. (Currently Amended) The system according to claim 8-~~or~~9, further comprising:  
warning means for setting an alarm criteria range based upon said basic stock  $\beta$ , and  
monitoring a total of shipping quantities in a period from a basic alarm time to “c” days after  
the basic alarm time, when the total is beyond the alarm criteria range issuing an warning; and  
reconfiguration means for recalculating, when the warning is issued, said basic stock  
and/or said order point to reconfigure them.

15. (Original) A program for executing an inventory management method for  
controlling amounts of stocks, said program comprising the steps of:  
storing delivery times and quantities of order lots accepted and restock lead times  
predetermined every item in a storage;  
selecting at least one order lot accepted, having a delivery time within a period from  
“b” days before to “a” days after a basic time, from said order lots accepted, to set a threshold  
value  $x+y\sigma_1$  (where y is equal to or more than 0) based upon both an average x and a standard  
deviation  $\sigma_1$  of quantities of said selected order lot(s) accepted;  
classifying at least one order lot accepted having a quantity  $\alpha$  of the selected order  
lot(s) accepted as a normal accepted order lot(s), wherein the  $\alpha$  is less than or equal to said  
threshold value; and  
calculating a basic stock using a predetermined formula from said classified normal  
accepted order lot(s).

16. (Original) A program for executing an inventory management method for  
controlling amounts of stocks, said program comprising the steps of:  
storing delivery times and quantities of order lots accepted and restock lead times  
predetermined every item in a storage;

selecting at least one order lot accepted, having a delivery time within a period from “b” days before a basic time to the basic time, from said order lots accepted, to set a threshold value  $x_1 + y_1 \sigma_2$  (where  $y_1$  is equal to or more than 0) based upon both an average  $x_1$  and a standard deviation  $\sigma_2$  of quantities of said selected order lot(s) accepted, and selecting at least one order lot accepted, having a delivery time within a period from the basic time to “a” days after the basic time, from said ordered lots, to set a threshold value  $x_2 + y_2 \sigma_3$  (where  $y_2$  is equal to or more than 0) based upon both an average  $x_2$  and a standard deviation  $\sigma_3$  of quantities of said selected order lot(s) accepted;

classifying at least one order lot accepted having a quantity “B”, being less than or equal to said threshold value  $(x_1 + y_1 \sigma_2)$ , of the selected order lot(s) accepted, having a delivery time before the basic time, as a normal accepted order lot(s), and classifying at least one order lot accepted having a quantity “A”, being less than or equal to said threshold value  $(x_2 + y_2 \sigma_3)$ , of the selected order lot(s) accepted, having a delivery time after the basic time, as the normal accepted order lot(s); and

calculating a basic stock using a predetermined formula from said classified normal accepted order lot(s).

17. (Currently Amended) The program according to claim 15-~~or 16~~, wherein said calculating a basic inventory step comprises:

calculating an order point “r” and the basic stock  $\beta$  using following equations:

$$r = cz + m\sigma_4 \sqrt{c}$$

$$\beta = r + tz$$

where z signifies an average shipping quantity per day of an order lot, having a delivery time within a period from the basic time to “a” days after, of said normal accepted order lot(s), c represents the restock lead time, t is an order differential time delay, m is equal to or greater than 1,  $\sigma_4$  signifies a standard deviation of shipping quantities per day of order lots accepted, having a delivery time within a period from “b” days before to the basic time, of said normal accepted order lot(s);

when  $d + e \leq r$ , where d signifies a present amount of a stock and e represents a quantities on order, calculating a required order quantity “f” using an equation  $f = \beta - (d + e - cz)$ .

18. (Currently Amended) The program according to claim 15-~~or 16~~, wherein a relationship between said a and b is  $a:b=1:1.5-3$ .

19. (Currently Amended) The program according to claim 15-~~or 16~~, wherein said "a" is in a range as follows:  $5days \leq a \leq 60days$ .

20. (Currently Amended) The program according to claim 15-~~or 16~~, further comprising the step of:

setting an alarm criteria range based upon said basic stock  $\beta$ , and monitoring a total of shipping quantities in a period from a basic alarm time to "c" days after the basic alarm time, when the total is beyond the alarm criteria range issuing an warning.

21. (Currently Amended) The program according to claim 15-~~or 16~~, further comprising the steps of:

setting an alarm criteria range based upon said basic stock  $\beta$ , and monitoring a total of shipping quantities in a period from a basic alarm time to "c" days after the basic alarm time, when the total is beyond the alarm criteria range issuing an warning; and

recalculating, when the warning is issued, said basic stock and/or said order point to reconfigure them.